

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An illumination system, comprising a radiation source and a fluorescent material comprising at least one phosphor capable of absorbing a part of light emitted by the radiation source and emitting light of wavelength different from that of the absorbed light; wherein said at least one phosphor is an oxido-nitrido-silicate of general formula

| EA_{z-z}Si_{5-a}B_aN_{8-a}O_a:Ln_z, wherein 0 < z ≤ 1 and 0 < a < 5-5,
| comprising at least one element EA selected from the group
| consisting of Mg, Ca, Sr, Ba and Zn and at least one element B
| selected from the group consisting of Al, Ga and In, and being
| activated by a lanthanide selected from the group consisting of
cerium, europium, terbium, praseodymium and mixtures thereof.

2. (Currently Amended) An illumination system according to
claim 1,

wherein the fluorescent material comprises a red phosphor
~~of~~ ~~of~~ having a general formula of $EA_{2-z}Si_{5-a}B_aN_{a-a}O_a:Ln_z$, wherein $0 < z \leq 1$
and $0 < a < 5$ and a green or yellow phosphor.

3. (Currently Amended) An illumination system according to
claim 1,

wherein the ~~a~~ green or yellow phosphor is selected from
the group of

$MS:Eu,Ce,Cu$ comprising at least one element selected from
the group $M = Mg, Ca, Sr, \text{ and } Zn$;

$MN_2S_4:Eu,Ce$ comprising of at least one element selected
from the group $M = Mg, Ca, Sr, \text{ and } Zn$ at least one element selected
from the group $N = Al, Ga, In, Y, La, Gd$,

$(Re_{1-r}Sm_r)_3(Al_{1-s}Gas)_5O_{12}:Ce$, where $0 \leq r < 1$ and $0 \leq s \leq 1$ and
Re selected from Y, Lu, Sc, La and Gd

and $(Ba_{1-x-y-z}Sr_xCa_y)_2SiO_4:Eu_z$, wherein $0 \leq x \leq 1$, $0 \leq y \leq 1$ and $0 < z < 1$
 $0 < z < 1$.

4. (Withdrawn) An illumination system according to claim 1,

wherein the radiation source is a UV- or blue-emitting LED.

5. (Currently Amended) An illumination system according to

claim 1,

wherein said radiation source comprises a nitride compound semiconductor represented by the general formula
 $In_iGa_jAl_kN$, where $0 \leq i \leq 1$, $0 \leq j \leq 1$, $0 \leq k \leq 1$ and $i+j+k=1$. $i+j+k=1$.

6. (Withdrawn) An illumination system according to claim 1,

wherein the system is a lamp.

7. (Original) An illumination system according to claim 1,

wherein the system is a traffic sign.

8. (Withdrawn-Currently Amended) A phosphor capable of absorbing a part of light emitted by the radiation source and emitting light of wavelength different from that of the absorbed light; wherein said at least one phosphor is an oxido-nitrido-

silicate of general formula

$EA_{2-z}Si_{5-a}B_aN_{8-a}O_a:Ln_z$, wherein $0 < z \leq 1$ and $0 < a < 5$
comprising at least one element EA selected from the group consisting of Mg, Ca, Sr, Ba and Zn and at least one element B selected from the group consisting of Al, Ga and In, and being activated with a lanthanide selected from the group consisting of cerium, europium, terbium and mixtures thereof.

9. (Withdrawn) A phosphor according to claim 8,
of general formula $(Sr_{1-x}EA_x)_{2-z}Si_{5-a}(Al_{1-b}B_b)_aN_{8-a}O_a:(Eu,Ce)_z$,
wherein $0 \leq x \leq 1$ and $0 \leq b \leq 1$.

10. (Withdrawn) A phosphor according to claim 8, of general formula

$(Sr_{1-x-y}Ba_xCa_y)_{2-z}Si_{5-a}Al_aN_{8-a}O_a:(Eu,Ce)_z$ wherein $0 \leq y \leq 1$.

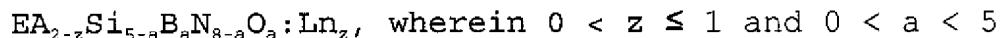
11. (Withdrawn-Currently Amended) A phosphor according to claim 8
of general formula

$Sr_{1-\underline{.56}}Si_{3}Al_{2}N_{6}O_{2}:Eu_{0.04}$ $Sr_{1.\underline{56}}Si_{3}Al_{2}N_{6}O_{2}:Eu_{0.04}$.

12. (Withdrawn) A phosphor according to claim 8,

wherein silicon is substituted by germanium.

13. (New) An illumination system comprising a radiation source and a fluorescent material comprising at least one phosphor capable of absorbing a part of light emitted by the radiation source and emitting light of wavelength different from that of the absorbed light; wherein said at least one phosphor is an oxido-nitrido-silicate of general formula



comprising at least one element EA selected from a group of Mg and Zn and at least one element B selected from a group of Ga and In, and being activated by a lanthanide selected from a group of cerium, terbium, praseodymium and mixtures thereof.

14. (New) The illumination system of claim 13, wherein the at least one element EA may be further selected from a group of Ca, Sr and Ba and the at least one element B may be Al, and being activated by a lanthanide selected from a group of europium.

15. (New) The illumination system of claim 13, wherein the fluorescent material comprises a red phosphor having a general formula of $EA_{2-z}Si_{5-a}B_aN_{8-a}O_a:Ln_z$, wherein $0 < z \leq 1$ and $0 < a < 5$ and a green or yellow phosphor.

16. (New) The illumination system of claim 15, wherein the green or yellow phosphor is selected from the group of MS:Eu,Ce,Cu comprising at least one element selected from a group M = Mg, Ca, Sr, and Zn;

MN₂S₄:Eu,Ce comprising of at least one element selected from a group M = Mg, Ca, Sr, and Zn at least one element selected from a group N = Al, Ga, In, Y, La, Gd,

(Re_{1-r}Sm_r)₃(Al_{1-s}Gas)₅O₁₂:Ce, where $0 \leq r < 1$ and $0 \leq s \leq 1$ and Re selected from Y, Lu, Sc, La and Gd,

and (Ba_{1-x-y-z}Sr_xCa_y)₂SiO₄:Eu_z, wherein $0 \leq x \leq 1$, $0 \leq y \leq 1$ and $0 < z < 1$.

17. (New) The illumination system of claim 13, wherein the radiation source comprises a nitride compound semiconductor

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represented by the general formula $In_iGa_jAl_kN$, where $0 \leq i \leq 1$, $0 \leq j \leq 1$,
 $0 \leq k \leq 1$ and $i+j+k=1$.

18. (New) The illumination system of claim 13, wherein the system is a traffic sign.